Designing for Individuals with dementia: Tool box approach

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Aims

- Examine important principles and guiding beliefs

- Ethical Principles

- Present one example of user centred design

Design Paradox

- A Cretan sails to Greece and says to some Greek men who are standing upon the shore: "All Cretans are liars." Did he speak the truth, or did he lie?

Person Centred Care

- Person Centred care, recognising the subjective reality of the person with dementia
- D= P+B+H+NI+SP
- Edvardsson et al 2010
  - Biographical knowledge of the person
  - Using reminicence
  - Acknowledging the personal own subjective reality
  - Subjective reality higher order than the task to be completed
  - Routines flexible

Ethical considerations

- Deploying sensors in private homes
- ➢ Informed consent
- ➢ Maintaining privacy
- ➢ Unobtrusive sensors
- User centred design
- N.B too greater task load too early in the programme (Orpwood et al 2005)

Guidelines

1. User interaction should be kept to a <u>minimum</u>

2. The technology should appear <u>familiar</u> to the individual with dementia

3. The technology should be <u>empowering</u>, helping the individual with dementia to solve their own problems and complete their own tasks

4. The technology should <u>reassure</u> the individual with dementia

5. Algorithmic applications should be based on <u>large datasets</u> to avoid overreliance on small and therefore non-representative datasets

Continued

6. The technology should be <u>tamper-proof</u> and

7. The technology will reside in a <u>person's home</u> and therefore should have an aesthetic

8. The technology should be <u>person-centred</u> and not carer-centred

9. The technology should provide the person with dementia with a feeling of <u>independence</u>

10. The technology should acknowledge the person with dementia as being an individual with <u>abilities</u>

Continued

11. The technology should <u>engage caregivers</u> at the first stage of development, and be refined somewhat before it is presented to the individual with dementia

12. The technology should <u>emulate carer behavior</u>, by providing reminders, support, and reassurance to the individual with dementia

Tool box approach: Active partners in the design process

Questions we asked ourselves?

- Is the system acceptable in the home, is it non-intrusive, and useful to the person with dementia and their family?

- Are the functional requirements of the toolbox system reflective of the reported needs of the person with dementia, as personally reported and reported by caregivers?

- What is the functional status of the person with dementia as operationalised in the five domains, and can the system optimise status in these areas?

Questions we asked PwD or carer

- Do you currently use technologies to help in these areas? Would you consider doing so?

- Following the technical presentation depicting the sensors available to support in these areas, participants were asked – "Do you think these sensors would be useful? Would you accept them in your home?"

- Are wearable sensors acceptable?